XVII. *Account of an Earthqua'e at* Hafodunos *near* Denbigh. *By* John Lloyd, *Eſq. F. R. S. in a Letter to Sir* Joſeph Banks, *Bart. P. R. S.*

Read April 5, 1781.

Hafodunos near Denbigh,
DEAR SIR, Dec. 31, 1781.

UPON the 29th day of laſt Auguſt, at 8 h. 37′ 30″, I was ſitting on my * bed-ſide, and heard a rumbling noiſe, as if at a diſtance: the ſound ſeemed to approach me, and when it was greateſt the bed rocked and ſhook ſo much that I could ſcarcely keep my ſeat. I could have no doubt of its being an earthquake, and inſtantly looked at my barometer, which is of Mr. DE LUC's conſtruction; it ſtood at 29.57 inches. Attached thermometer 65°. The barometer had been ſtationary nearly for the three preceding days, and did not ſeem to be affected with the ſhock. The morning was remarkably fine, and not a ſingle cloud to be ſeen. Two of my ſiſters and a gentleman were walking upon the terrace in the garden by the ſide of a wall: they all perceived the noiſe, at firſt as if at a great diſtance; but when it was greateſt they perceived the wall to ſhake, though they did not obſerve any agitation under their feet. As they were walking, and obſerved the ſpot when

* This houſe is built upon the ſide of a rock; and my bed-chamber, though up two pair of ſtairs, is on a ground-floor, the floor is not more than one foot from the ſolid rock in my bed-chamber.

they

they firſt heard the ſound, and the ſpot they came to when it ceaſed, I was enabled to aſcertain its duration pretty exactly, and find it to have been from fifteen to eighteen ſeconds. Its courſe was nearly from ſouth-eaſt to north-weſt. Some other perſons in our houſe perceived a double ſhock; and this has been obſerved by many who felt it in other places. It was felt at Flint by Mrs. SEAMAN and her daughter, who obſerved the cups rattled upon the ſaucers as they ſat at breakfaſt. Mr. PENNANT's family, at Downing, fancied that an empty waggon was coming into the back-court, which is paved. It was ſtrongly felt at Llonrwſt by the whole town, and part of a ſtone wall was flung down. At Carnarvon (which is in the ſame parallel of latitude as this place, 53° 10′) the ſhock was very ſlight. It was perceived in many places about Conway; but not at all by any one in town. Sir HUGH WILLIAMS felt it very ſtrongly at his houſe near Beaumaris. At our friend Mr. DAVIES's, in that town, a door clapped backwards and forwards ſeveral times; and at Lord BULKELEY's ſeat, Boron-hill, the family were much alarmed, it was ſo violent. It was ſtrongly felt at Holyhead, and at an eminent ſolicitor's in the iſland of Angleſey, the deſks before ſeveral clerks in his office ſhook ſo that they could not write. It was ſtrongly perceived at Mr. FITZMAURICE's, at Lleweny-hall in the Vale of Clwyd, and in ſeveral other places in that Vale. All the peninſula in Carnarvonſhire called Llun, ſurrounded by St. George's Channel, was ſhook very much. There have been two ſhocks ſince this I have been deſcribing. Mr. PENNANT felt one; but I was not ſenſible of either. The times it was felt at differ very much on account of the variations in the ſeveral dials from whence the clocks are regulated; but I am very exact as to my own time, having the day preceding the earthquake, and that very day, aſcertained

aſcertained my time by equal altitudes, taken with one of Mr. BIRD's aſtronomical quadrants of one foot radius. As every phenomenon of this kind is intereſting, you may, perhaps, wiſh to communicate this account to the Royal Society; which you are welcome to do, if you think it worth the attention of ſo illuſtrious a body.

I have the honour to be, &c.